

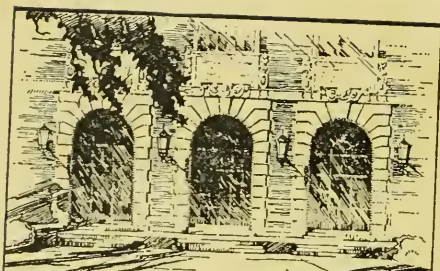
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HARLOW, ALVIN F.

INDIANA'S CANAL
HERITAGE

(1926 orig.; 1954 rpt.)

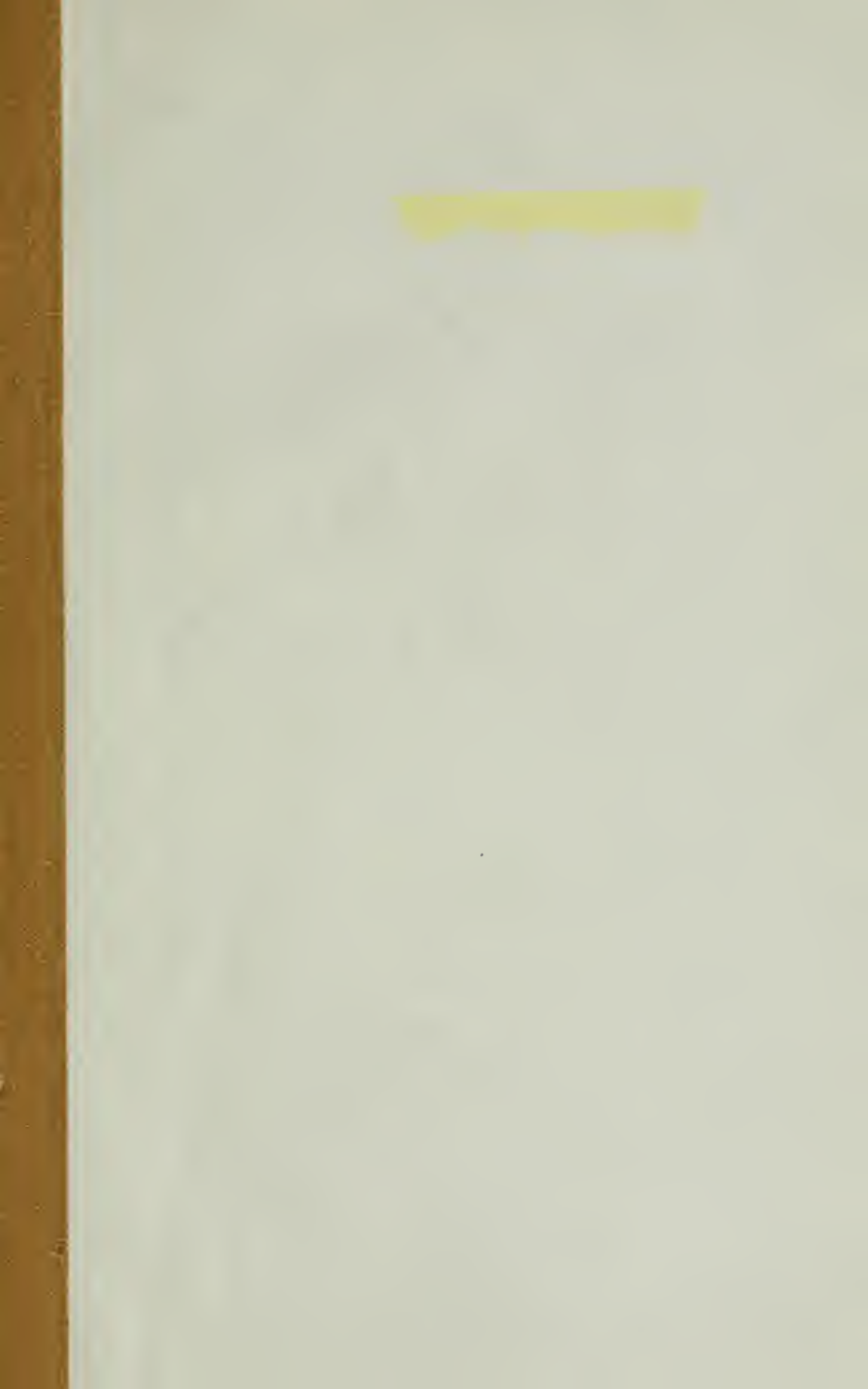


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Indiana's Canal Heritage

Indiana's Canal Heritage

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Old Fort Line

FOREWORD

The canal-building craze was an interesting phase of early nineteenth-century American history. The following study describes the blind enthusiasm for canals and the dire financial consequences as construction spread westward through Pennsylvania and Ohio into Indiana. Chapters XII, XIII, XIV, and XXVI from OLD TOW-PATHS by Alvin F. Harlow (copyright 1926, D. Appleton & Company) have been reprinted with the kind permission of the publisher, Appleton-Century-Crofts, Inc.

The Boards and the Staff of the Public Library of Fort Wayne and Allen County present this publication in the hope that it will interest readers in Indiana's long defunct canal system.

FLUSH TIMES AND THE CANAL MANIA OF THE THIRTIES

AS early as 1828 Captain Basil Hall, an honest and tolerably shrewd observer, remarked in commenting upon the Erie Canal, "The example of this successful experiment has, I suspect, done some mischief in the rest of the American States; for it has set agoing a multitude of projects many of which, I am convinced, can never answer any good purpose, except to such speculators as may have sold their original shares at a premium and then backed out of the scrape." These words become profoundly prophetic in the light of what happened after 1830.

Beginning soon after the close of the war with England in 1815 and continuing until 1837, there was a rising swell of prosperity in the United States, culminating in a period of flush times in the middle '30's such as the people had never known before. Such a wave carried with it its inevitable curses—speculations, inflation, loss of mental balance, financial legerdemain and thievery, and finally, the disastrous reaction.

One of the first phases of this growing prosperity is seen in the enthusiasm over canals just as the Erie was being completed. The entire stock issue of a new canal corporation, let it be one or two millions or what not, was sometimes fully subscribed and more within a few minutes or hours after the books were opened. To be sure, many of the subscribers made only small payments down and then failed to pay the balance; but many others eagerly invested large sums, often

their all, in canal enterprises which sometimes prospered, but which in many cases made small returns or none at all.

About 1831 the canal fever was succeeded in the popular mind by a railroad mania. Locomotives had been tried in several places and found to be really practicable. Some men saw or fancied they saw that the railroad was destined to revolutionize transportation and commerce and to supply a new means of building up the wilderness. Stock of the Mohawk and Hudson Railroad, which at first could hardly be given away, now jumped to 162. When the books of the Paterson and Hudson Railroad were opened, three times the amount of stock available could have been sold, and the price quickly went up to 126. All the shares of the new Catskill Railroad were taken in a few minutes.

There was a comparatively mild depression in 1834, but the country quickly recovered from this, and by 1836 the peak of prosperity, high prices and speculation was reached. That was a memorable year in American history. Cotton had risen rapidly in price; emigrants were pouring into the Middle West and even across the Mississippi; scores of new banks were started and older ones increased their capital stock, all of them sending forth floods of paper money; thirty-five State banks had large Government deposits formerly in the Bank of the United States, and all were anxious to loan money to any one who wanted it. Some of the new banks were organized by sharpers merely to speculate with the public's money; and in other banking organizations, honest men were frequently led into ruinous ventures and crime by the gambling spirit which pervaded the air.

One of the phases of the aberration was a craze for land speculation, especially in Government lands, which could be bought for \$1.25 per acre. Millions of acres were bought and held for a rise in value. Paper towns were laid out in prairie and wilderness, and land just bought from the Government was at once valued at \$10 or \$15 per acre, or in the newly platted towns often at \$20 per lot. The village of

Chicago was the center of the land mania in the Middle West, and salesmen went from there back to New York and Boston to sell lots in the new metropolis as well as other even more imaginary cities. Never prior to 1834 had the sale of public lands amounted to \$4,000,000; but they rose to \$4,887,000 in 1834, to \$14,757,000 in 1835 and to \$24,000,000 in 1836.

These great sales were made not for cash but mostly for credit on the books of the thirty-five banks which held the Government deposits. Their notes—which were legal tender for Government land—were borrowed by the professional speculators, exchanged for land, deposited as public revenue in some deposit bank, loaned again to speculators, used again to buy land, came back once more to the Government banks, and so went around and around again, transferring hundreds of thousands of acres from the Government to the land sharks, but without adding one dollar of cash to its available funds.

One of the cruel results of such a system was that the speculator, with his pockets stuffed with this inflated bank currency, could outbid genuine settlers and then hold the land at a higher price, which he demanded in real money. And most of this speculation had to do with land in the Middle West, which as yet had no railroads, almost no wagon roads, and canals only in Ohio.

There was the rub! The farther one got away from the Atlantic coast, the less benefit the average citizen derived from the wealth which the country was said to possess. Prosperity might be rampant in the East, but the people in the backwoods of Indiana, Illinois, Michigan and neighboring States couldn't seem to feel themselves any the better off for it. They owned some of the most fertile land in the world—could produce farm crops, meat, timber, leather and other things in enormous quantities, but they had no means of getting their merchandise to market. The vast majority of the citizens of those States, in spite of the fact that some

of them owned hundreds of acres of land, were in desperate poverty. Transportation seemed absolutely necessary to save them.

Ohio had begun to build canals in 1825. Her position then had been much like that of the territory just west of her in 1835—many settlers but no money and no markets. "Within my memory," wrote Henry Howe, the Ohio historian, "the farming folks used to start to church Sundays barefoot, carrying their shoes and stockings in a handkerchief until they got to the foot of South Hill . . . where they would stop and put them on. At that time wheat brought but 25 cents a bushel and had no outlet except by wagon to Cleveland or Pittsburgh. Whisky sold for two cents a dram or eighteen cents a gallon.

"The only things that would bring cash were beeswax and ginseng. Store coffee then cost 50 cents a pound; and of course it could not be bought without ginseng, beeswax or cash. Most well-to-do families made it a point to have store coffee on Sundays; on other days they used coffee made from burnt rye or wheat."

The opening of the Erie Canal, followed by the building of Ohio's canals, brought about a great change in this situation. Home-produced flour, which had sold for only \$3.00 a barrel in Cincinnati in 1826 brought double that figure in 1835. Corn had risen from twelve to twenty cents per bushel, and other products were proportionately higher. And yet some citizens of the State, especially those who had received no great benefits from the canals, were pointing to their tax bills and to the distressed financial situation of the State government, and wailing that they had exchanged the frying pan for the fire.

The lamentable feature of the internal improvement policy of the fourth decade was that States continued to build canals when it was becoming evident to discerning people that canals, if not obsolete, were at least outmoded. It is a significant fact that after 1830 very few canals were built by



They put on their shoes and stockings.

private enterprise; and that those which were built were comparatively short ones, and in almost every case more or less profitable. States, on the other hand, built hundreds of miles of new canals, spending enormous sums and receiving no visible profit in return—though it must be admitted that there was scarcely a one of these waterways which did not confer certain incalculable benefits, sometimes great benefits, on its surrounding territory.

One of the curses of the times was a surplus in the national treasury, which Congress had decided to distribute among the States, to do with as they saw fit. Every State politician at once began planning how his Commonwealth would spend its share of that money; and the mere existence of such a surplus served to strengthen the popular belief that a sort of millennium had arrived, when nothing untoward could happen.

In 1835–36 the chief topics of the day were banking, real estate and internal improvements. The national debt had been paid, foreign capital was flowing towards us in large quantities and money was dirt cheap. Banks sprang up like mushrooms, and all began to issue paper money and urge people to accept loans. At the beginning of 1830 there were 330 State banks in existence in the country, with a banking capital of something like \$110,000,000. The loans and discounts for that year were \$200,000,000, and note circulation \$61,000,000. The refusal to recharter the United States Bank brought about a scramble for a share of its business, and more than 170 new banks sprang into existence at once. Then the removal of the deposits and the ensuing speculative craze caused as many more to be organized, and by the end of 1836 there were 677, with a capital of \$378,000,000; loans and discounts were \$457,000,000 and notes in circulation \$140,000,000.

Meanwhile the mania of land speculation continued in crescendo. Lotteries had but recently been eliminated, but this new form of gambling filled its place acceptably and

furnished even greater thrills. Prices were paid for certain pieces of real estate then which were not realized again for half a century or more afterwards. Farmers, shopkeepers, clerks, mill workers and laboring men mingled with the wealthier gamblers at the auction sales, exchanges, banks and real estate offices. Many forsook their normal pursuits and gave their whole time to get-rich-quick schemes. Wild and inaccessible forest tracts in Maine, prairie lands in the far West, city lots in New York, Philadelphia, Chicago and elsewhere, all were meat and drink to the high-rollers. A township in Maine, purchased seven years before at 25 cents an acre, now sold at \$12 an acre. Farm land on Long Island brought \$1,000 an acre. One hundred and fifteen acres near Louisville which in 1815 had cost \$675 sold in 1835 for \$275,000. Some of the prices in Chicago, whose population was 4,000, were almost comic. Water-front lots, for example, 45 by 200 feet, sold for \$7,000. Auction sales were taking place daily somewhere in the country, and it was no uncommon thing for two or three hundred thousand dollars' worth to be sold in an afternoon.

The inflation of the currency caused prices of labor, fuel, clothing and all commodities of life to rise to figures previously unheard-of save occasionally in war times. Grain became so high in the East that cargoes of wheat, rye and oats began coming from Europe early in 1836 and sold at good prices. Flour, which had been \$6.00 a barrel in Cincinnati in 1835 brought \$15 early in 1836. Late in the year it sold at \$8.62 in New York. Salt was \$10 a bag in Cincinnati, and New York was paying eighteenpence a pound for beef and \$2.00 for a good turkey. Oak firewood cost \$16.50 a cord in New York in March and \$20 in Philadelphia.

It was a tragic thing that grain should have been imported from Europe when the Middle Western States could have grown all that the country then needed, and more. The principal reason why they did not was that even if they had, very little of the grain could have been hauled to market at a

cost to compete with the European product. This goes far towards explaining the internal improvement madness which seized the Midwestern States in the '30's. Their citizens have been sharply criticized for their ambitious attempt at sudden expansion, but when all the facts are known, their desperate strivings for a transportation system were not so blamable as might at first appear.

Even in the '20's dwellers on the upper Wabash were begging for relief. Salt could then be gotten only by wagon and ox team from Michigan City, at a cost of \$12 a barrel. Their neighbor to eastward, Ohio, was enthusiastically building an extensive system of canals, and was thought to be on the high road to prosperity. Indiana, Illinois and Michigan heard wistfully of the rejoicings in Ohio as this and that section of the canals was completed. Stirring news came also of the wonderful progress of the Erie—more than a million dollars in tolls in 1831!—fifty millions added to the value of property along its course—cities springing up on its banks as if by a magician's touch! The stocks of the leading corporation canals—Schuylkill, Lehigh, Morris, Delaware and Hudson—were all above par; Schuylkill, par at 50, reached 145 in 1832.

All this could not fail to unsettle States whose land was sweating richness, yet whose citizens and whose State Governments were in poverty largely for lack of transportation. "We are apt to judge leaders of this period hastily," says Logan Esarey, the Indiana historian, "and accuse them of losing their heads. They did make a gigantic mistake but there are some mitigating conditions. This venture (the Wabash and Erie Canal) was considered and held before the public ten years before the work was commenced. Then it was undertaken only in despair of any better means of reaching a market. A bushel of corn at Indianapolis was worth twelve to twenty cents. On the river board it was worth fifty cents. An ordinary acre of farm land would produce sixty bushels—a loss on each acre, due to lack of trans-

portation facilities, of \$18. On such a basis, fabulous arguments can be reared. The loss on 100 acres was \$1,800 annually. The State had within its boundaries millions of such acres whose value and usefulness to the State depended on commercial communication with the world."

Borrow money and build canals, was the popular cry. Canals would not only build cities and commerce in the wilderness, but they would soon pay for themselves and eventually take care of most of the expenses of the State government—some said all! Look at the Erie—a million dollars revenue in a year, and still growing! And though the Erie had threatened the well-being of Pennsylvania and Maryland, yet those States were now back on the path to fortune again with their series of canals, destined to search out every corner of their respective commonwealths.

When a bill was introduced in the Illinois Legislature in 1825 authorizing a corporation to build a canal between the Illinois River and Lake Michigan, Daniel P. Cook, member of Congress from Illinois, vehemently opposed the measure, insisting that "the rich harvest which it (the canal) was destined to yield should go into the treasury of the State." He declared that "in less than twenty years it would relieve the people from the payment of taxes and even leave a surplus to be applied to other works of public utility." The same arguments were heard in Indiana and Michigan in 1836.

Indiana had begun the Wabash and Erie Canal in 1832. By 1835 some 25 miles of channel was in operation, but its tolls were not even paying for its maintenance. Not yet comprehending that the State was too sparsely settled to support a canal, the people were swept off their feet by the ecstasy of 1835-36, and the Legislature authorized the construction of more than 1,200 miles of canals, to say nothing of one, perhaps two long railroads and many miles of macadamized road. The cost of this system was vaguely guessed at \$20,000,000. As a partial payment the State

blithely bonded itself for \$10,000,000. As Indiana's population that year was about 500,000, this meant a debt of \$20 a head for every man, woman and child in a State where a goodly percentage of the people were so "land-poor" that they lacked the common necessities of life.

The insistence upon canals was the most deplorable feature of the Indiana program. Every day news was coming from the East of the rapid building of railroads and of their gain in popular favor. Already some of the Eastern canals were feeling the effect of their competition. But whenever a canal enthusiast was reminded of these facts, he replied by pointing to the Erie. If other canals did not succeed, they were wrongly located or poorly managed. The routes of the Wabash and Erie and the Illinois and Michigan, so ran the arguments of their partisans, were strategically just as sound, just as inevitable as that of the Erie.

But Illinois, though rushing into an infatuation wilder than that of Indiana, still retained sufficient balance to plan only one short canal. With a population of less than 400,000 and a much larger territory to improve, the people themselves nevertheless held a convention in 1836 and planned a great improvement system, which the Legislature promptly adopted. The Illinois and Michigan Canal was to be built and no less than nine railroads, aggregating 1,300 miles in length, were to crisscross the State. In addition to this, five rivers were to be improved, and to every county not touched by a railroad or a navigable river, \$200,000 in cash was to be handed by way of compensation. In the prevailing land boom so many cities were planned that some of the best thinkers were gravely concerned lest the State become crowded with cities and leave no room for agriculture.

And all this in the face of the fact that the State was heavily in debt, that its school fund had been borrowed by the Legislature and spent, and that its territory was in even more of a frontier condition than Indiana's. Twelve million

dollars was to be raised by a loan—a debt of thirty-five dollars for every man, woman and child in the Commonwealth. Eight millions were intended for railroads and four millions for the canal. Just why eight million was specified for the railroads it is difficult to say, for there had been no preliminary survey of the routes, no estimate of the cost. The crowning absurdity was the specification that work should begin on all the railroads at each end and from the crossings of the rivers simultaneously. Large brick depots were built at many places in advance of the track, and sometimes the railroad never reached them, or passed several miles away from them.

Michigan was perhaps the most insane of all. With a population of only a few more than a hundred thousand, she bonded herself for \$5,000,000 and planned three railroads across the State and several canal routes. Remember that all three of these Midwestern States did not contain more than a million people; they were still mostly forest and prairie, a goodly percentage of their population lived in log cabins and millions of acres of land within their boundaries were still owned by the Federal Government.

In the East the greater States did not escape a touch of the midsummer madness. New York's million and a half yearly revenue from the Erie was partly responsible for her venture into two of her greatest errors (to say nothing of some minor ones), namely, the building of the Chenango and the Genesee Valley Canals, at a combined cost of about \$8,000,000.

Pennsylvania meanwhile had built up a canal system which was bringing in \$700,000 a year in tolls, but she had likewise accumulated a debt of \$24,000,000, on which the tolls did not even pay the interest. Maryland, again alarmed for the prosperity of Baltimore and the State, now planned to borrow \$8,000,000 and therewith to give financial aid to a great system of internal improvements, the main east-and-west line of which consisted of the Chesapeake and

Ohio Canal, the Baltimore and Ohio Railway and three other short rail lines. The Chesapeake and Ohio Canal was to be extended to Baltimore, and another canal was to be built from Baltimore to the Susquehanna and up that stream. Still another canal was to connect Baltimore and Annapolis, and there were to be north-and-south railroads reaching into Pennsylvania and to the remotest counties at the southern point of the State.

Boom conditions and the cheapness of money caused materials and labor to be higher than ever before. Particularly was this true in the Western States, where some manufactured materials must be carried farther, and where the scarcity of labor caused them to offer unusually high wages—\$20 to \$30 a month!—which drew many men away from the works in New York and Pennsylvania.

The panic of 1837, which followed hard upon this year of delirium, upset a great many calculations, and caused the relinquishing of many contracts; but most of the public work continued until another stringency in the autumn of 1839 dealt State projects the severest blow they had yet received. The hardest hit were those three Western States which had risked so much. All three of them had allowed large blocks of their bonds to get into the hands of banking or brokerage concerns who sold or hypothecated the securities and then went bankrupt without paying the States for them. The Morris Canal and Banking Company failed, owing Indiana two and a half millions; and it, with its sister concern, the United States Bank of Pennsylvania, had gotten possession of Michigan's entire bond issue of five millions, but had paid the State very little cash. Illinois had suffered heavily from the suspension of the same United States Bank and of a London firm of brokers. Her own State bank failed, and added to the general distress. She owed \$14,000,000, her treasury was empty, and at one time there was not even sufficient cash to buy postage stamps for the State's letters.

All work was necessarily brought to a halt. Fortunately,

Michigan had not begun work on her canals, and never did begin it. Neither Illinois nor Indiana had much to show for their expenditures. Illinois was strewn with short bits of partly constructed railroad track, Indiana mostly with unfinished canals. Isolated and useless bridges, culverts, aqueducts, locks, dry canal channel, rails, ties, timber, tools were scattered everywhere, and already were beginning to decay.

Michigan simply repudiated her debts. Indiana compromised with her creditors, forcing them to accept much less than was due them. Fortunately for Illinois, in this crisis she had a wise Governor who by abandoning the greater part of the State program of improvement and by extra taxation and general retrenchment, finally steered the State into calmer water. The details of these episodes will be more fully discussed in the chapters devoted to the two States.

Ohio had completed her two main canals long before the panic, but was still saddled with their debts. The net earnings of the canals were not half the amount of the annual interest on the State debt, and she was compelled to assess heavy taxes at a time when farm products, owing to the depression, were selling at very low prices. Maryland, too, was in trouble. The canal and railroad companies who had borrowed heavily from the State had not (with the exception of one railroad) even kept up the payment of their annual interest. The State was therefore compelled to resort to drastic retrenchment and taxation.

Pennsylvania was in perhaps the worst case of the Eastern States. The suspension of specie payments in 1837 forced her to pay her interest for that year and the two succeeding ones in paper money, and her bonds, which had hitherto stood well in the market, now fell below par. The State owed \$34,000,000, and her yearly expense was a million dollars greater than her income. On February 1, 1840, Pennsylvania was for the first time compelled to default in

the payment of interest. Thereupon special taxes were laid; after much pleading, some bank loans were obtained, the interest was paid and the crisis was past.

But for several years afterwards all those States left keenly the evil effects of that period of wild inflation, and paid for it in increased taxes. Those four disastrous years from 1836 to 1840 mark the beginning of the end of the age of canals in America.

THE Erie Canal was barely completed when on July 23, 1826, the newspapers recorded a "novel scene" at Albany—that of a boatload of Swiss immigrants, still in their native costume, on their way to Ohio via the Hudson River and the Erie Canal. They had with their wagons, plows and other farming tools, said by the reporters to be "rude" in construction. This became a common sight in later years, the Swiss for a long time continuing to bring their implements with them.

Even this was not the first migration by canal. Before the Erie was half done, native Americans from New York and New England and Irish and English immigrants were following the canal as far as it went and then continuing by wagon to some likely-looking new town or pushing far into the interior.

Similar scenes were common when the Pennsylvania main canal was opened. "Almost every summer day in the latter '30's and '40's," says another item, "groups of merry German immigrants in wooden shoes might be seen on the decks of line boats going west from Harrisburg towards Ohio, Indiana and Illinois." Cincinnati, Chicago, St. Louis, Milwaukee and other western cities, to say nothing of the country, owe their large German populations in considerable degree to the Erie and Pennsylvania waterways. Switzerland County, Indiana, with its county seat of Vevay and its numerous French-Swiss family names, is a typical creation of the old canals.

The completion of the Erie and Pennsylvania Canals

(not to deprecate the assistance of several others) did more to populate all that vast territory lying beyond the Alleghenies than any other agency in our history. The old waterways deserve to be gratefully remembered for that, if for nothing else. Westward through all the westbound canals in the three decades preceding the Civil War poured a ceaseless, eager yet patient, dogged yet fiery and enthusiastic throng of pioneers, with eyes straining towards the new lands beyond the horizon. And as they went they sang the wistfully humorous songs which the great hegira had brought forth—"Ah, ha! Bound away—for the wild Mis-sou-ree!" and

*Oh, Susanna!
Don't you cry for me;
I'm a-going out to Oregon
With my banjo on my knee.*

The last two lines had several variants.

And then there was that Michigan classic, first heard in 1837, two stanzas of which ran thus:

*Then there's old Varmount, well, what d'ye think of that?
To be sure the gals are handsome and the cattle very fat.
But who among the mountains 'mid cloud and snow would
 stay
When he can buy a prairie in Michigamia?
Yes, yea, yea, in Michigamia.*

*Then there's the State of New York where some are very
 rich.
Themselves and a few others have dug a mighty ditch,
To render it more easy for us to find the way
And sail upon the waters to Michigamia.
Yes, yea, yea, to Michigamia.*

Silas Farmer in his *History of Detroit and Michigan* says that this song is "known to have been largely influential in

promoting emigration." The reference to New York indicates what was thought of the Erie Canal's part in the great westward movement.

Many of the emigrants who reached Buffalo by the canal took lake boats thence to Detroit and from there pursued their journey westward by wagon or in whatever manner they could. During the year 1830, 15,000 arrived at Detroit from the East—a few stopping there, but most of them going on. The *Detroit Free Press* of May 19, 1831, chronicles the arrival of lake steamers from the East during the past week carrying more than 2,000, "and nearly all in the prime of life." "Such was the tide of immigration during the entire season of navigation," says Farmer, "that both steam and sail vessels were crowded to their utmost capacity. On October 7, 1834, four steamboats brought nearly 900 passengers. . . . On May 23, 1836, 700 passengers arrived, and during the month there were ninety steamboat arrivals, each boat loaded with passengers. The roads to the interior were literally thronged with wagons. A careful estimate made in June by a citizen showed that one wagon left the city every five minutes during the twelve hours of daylight. In 1837 the immigration was fully as large; there was an average of three steamboats a day, with from 200 to 300 passengers each, and on one occasion in May, 2,400 passengers landed in a single day. The larger part of these immigrants were from New York, and the rest mostly from New England."

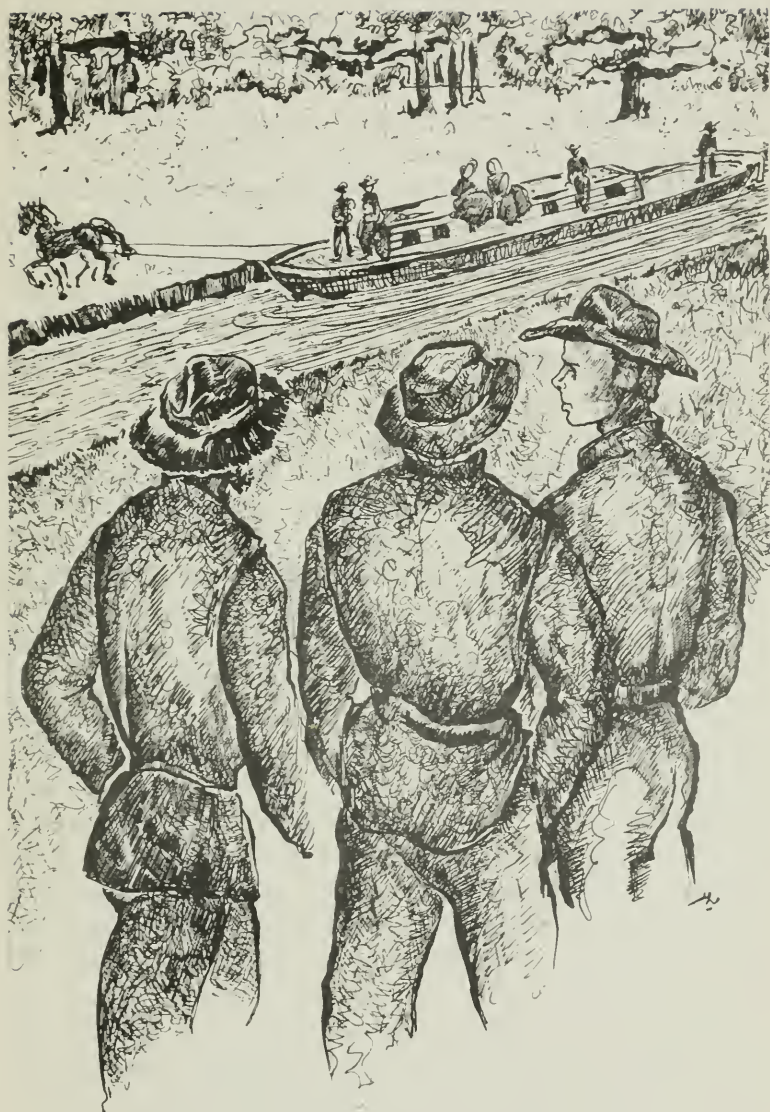
New York and New England! Through the vast artery of the Erie poured so much of the sturdiest, most vigorous, most restless blood of the northeast that Michigan, southern Wisconsin, northern Illinois and northern Ohio were largely peopled with pioneers from New England and New York—especially New England. Lois Kimball Mathews, in an interesting study of this subject, points out that of the first fourteen Governors of Michigan, six were from New York and six from New England; she points to the preponderance

of Congregational churches in Michigan, and also to the fact that the township system of Michigan is more like that of Massachusetts than is any other local government outside of New England. And Herbert Quick in *Vandemark's Folly* shows vividly how the Dutch and Yankee flood which rushed through the Erie rolled on, on, across the Mississippi into Iowa and Minnesota, into Missouri and Kansas, sending its wavelets even to the shores of the Pacific.

The canals of the Middle West, too, played a part in the populating of the States of that section of which few people have any conception to-day. The canals of Ohio, for example, distributed new settlers throughout the length and breadth of the State. Many turned aside from the lake at Cleveland and went down into the central portion, or came down the Ohio River and turned north on the main canal from Portsmouth. Others left the lake at Toledo and went up the Miami Canal. But from Toledo one of the great western avenues was that via the Miami and Wabash and Erie Canals into Indiana and Illinois; for the Wabash and Erie, after it passed Lafayette, ran southward so closely along the Illinois line that it benefited eastern Illinois almost as much as its own State.

Work on the Wabash and Erie was shrewdly begun at Fort Wayne, the point farthest east and nearest the Ohio line. The result was that the first sections completed (from 1835 on) were a valuable aid to westbound immigrants. When the canal was begun in 1832 Indiana had probably a little more than 350,000 inhabitants. By 1840 she had 684,000 and in 1850, 988,000. The growth of Illinois was even more phenomenal—157,000 in 1830, 476,000 in 1840 and 851,000 in 1850.

An early settler in upper Indiana said in later years, "All the immigrants from the East came in by the canal. The boats would take grain to Toledo and bring back immigrants and their goods by the hundred." The Indiana counties bordering on the section of the canal opened in 1835 had at that



The immigrants came in by canal.

time 12,000 inhabitants; in 1850 they had 150,000. In the three years following the opening of the first section from Fort Wayne to Huntington, five new counties were created along the route. Many people in southern Indiana moved up to the northern part of the State, attracted by the boom created by the canal.

Even though the Illinois and Michigan Canal was not completed until 1848, it had a large part in the great westward movement. Many emigrants, reaching the foot of Lake Michigan, went by canal to the Illinois River, thence down to the Mississippi; and from there via other streams, notably the Missouri and its tributaries, the courses of the pilgrims spread out fanwise to all quarters of the West, Southwest and Northwest.

Not only did the canals distribute the native American settlers, but also the foreign born. During the thirty years following the completion of the Erie Canal, it was estimated that 30 per cent of the foreign immigration entering the port of New York passed into the States served directly by the Erie and its western connections. The census atlas of 1870 showed a much greater density of foreign population along the trade-route waterways, and this was especially true of the Erie and its connections. In the territory along the Wabash and Miami Canals, for example, between Fort Wayne and Toledo, from 8 to 15 per cent of the total population was German. The Pennsylvania Canal, too, carried large numbers westward from Philadelphia and Baltimore, but New York during the first half of the nineteenth century had become preëminently the port of entry for immigration, handling as much as four or five of her nearest rivals combined.

"When I came down from Utica to Schenectady on my way home," wrote Francis Lieber, a traveler on the Erie Canal, "I believe that not two hours passed without our meeting one or several barges laden with Germans."

As this great Caucasian tide pressed forward, it swept

the aboriginal inhabitants of the land before it and along with it towards the sunset. A striking and significant picture of the times is that drawn by William Dean Howells of one of the memories of his early childhood along the Miami Canal:

"In 1831 the Senecas ceded their lands, forty thousand acres on the Sandusky, to the United States, and were removed to the southwest of the Missouri. Each of the other reservations was given up in turn for lands in the far West, and in the early forties I myself, when a boy living in Hamilton, saw the last of the Ohio Indians passing through the town in the three canal boats which carried the small remnant of their nation southward and westward, out of the land that was to know them no more forever."

Historians of Ohio admit that the Erie Canal was the making of Cleveland, and it was but slightly less beneficial to Detroit. During the twenty-five years that followed the completion of the Erie, Cleveland's population increased by more than 2,000 per cent and Detroit's by more than 1,000 per cent. Chicago, too, owes its rapid growth before the Civil War in no small degree to the Erie Canal. As for the State of Michigan, it is sufficiently significant to say that its percentage of increase in population between 1820 and 1840 was greater than that of any other State in the Union.

The ever-perspicacious Washington wrote in 1783 that the people west of the Alleghenies "hang upon a pivot. The touch of a feather would turn them any way. They have looked down the Mississippi till the Spaniards . . . threw difficulties in the way; and they looked that way for no other reason than because they could glide quietly down the stream . . . and because they had no other means of coming to us but by land transportation and unimproved roads."

In the early Nineteenth Century there were no longer any Spaniards to throw difficulties in the way, and so the people of the West again looked down the Mississippi. There was their only accessible market. The Mississippi

and its tributaries formed a mighty system of trade routes concentrating at New Orleans; a system which—had no east-and-west highways of commerce been developed—might have made that city the greatest port on the continent. With the coming of the steamboat to western waters, this advantage was enormously increased. All the products of the vast Mississippi Basin and the Great Plains were drained towards the Gulf coast. Even as late as 1841 New Orleans still held supremacy as a shipping port, the value of the exports going out from her wharves being \$34,000,000, while those through New York were only \$33,000,000. Had the east-and-west canals not been built, the Gulf coast cities might have taken the rank now occupied by Boston, New York and Philadelphia.

But this was not the most important thing. The serious matter was that which Washington dreaded—that the Appalachian Mountains were more and more dividing us into two peoples. The West and Northwest, cut off from the East by lack of trade routes, were coming more and more closely in touch with the slave-holding South. What might have been the political effect as the great issues which brought about the Civil War slowly developed—what it would have meant to present-day America—no one can guess. But with the opening of the Erie—and in lesser degree of the Pennsylvania Canal—the coveted trade connection was not only established, but also there poured into the West such a flood of New England Yankee and other anti-slavery eastern blood as cemented the North into a unit from the Atlantic to the Rocky Mountains. John L. Heaton in his *Story of Vermont* says, "It requires no fanciful imagination to conceive that the opening of the Erie Canal was an agency which did more than almost any other to curb the power of slavery."

The rush of westward emigration was largely responsible for the great number of "line" or emigrant boats which were seen on some of the larger east-and-west canals, particularly

the Erie and Pennsylvania. These boats furnished much poorer accommodations than the first-class passenger packets and charged a lower rate of fare. At first they carried some merchandise freight as well as passengers; but when emigrant travel became very heavy, all their freight space was devoted to the baggage, bedding and household goods of the movers.

Fare on the line boats was about $1\frac{1}{2}$ cents a mile, as against 3 or 4 cents on the packets; but at that rate the passenger must pay extra for his meals or else carry his own food with him. Horace Greeley spoke of them humorously as "cent and a half a mile, mile and a half an hour." They were much slower than the packets. A line boat had only two horses to the packet's three or four; the teams were poorer stock and went farther without being changed. The packet covered from 80 to 100 miles a day, while the line boat was lucky to do 45 or 50. Emigrants were not supposed to be in as great a hurry as other travelers, and even if they were, they had to accept their slow progress philosophically.

On the steamboats of the western waters a deck passage (which meant that the traveler lived and slept with his goods on the open deck) was even cheaper than on the canal line boats, the rates being usually less than a cent a mile. The through rates westward from Philadelphia via the Pennsylvania Canal to Pittsburgh and steamer beyond that point, as quoted in Peck's Guide Book for 1836 show this to be a fact:

"The following is from an advertisement of the Western Transportation, or Leach's Line, from Philadelphia:

	<i>Miles</i>	<i>Days</i>	
Fare to Pittsburgh	400	$6\frac{1}{2}$	\$6.00
" " Cincinnati	900	$8\frac{1}{2}$	8.50
" " Louisville	1050	$9\frac{1}{2}$	9.00
" " Nashville	1650	$13\frac{1}{2}$	13.00
" " St. Louis	1750	14	13.00

"The above does not include meals."

The guide book estimates that for the journey to Nashville or St. Louis "a deck passage will range between \$20 and \$25, supposing the person buys his meals at 25 cents and eats twice a day. If he carry his own provisions, the passage, etc., will be from \$15 to \$18." The book also admits that the boats seldom get through in the time scheduled, but advises travelers for their own sake to be patient and to make allowances for delays.

Emigrants sometimes moved west in their own boats, especially if they went via the Erie Canal. Horses could be hired from the regular lines to pull an ark, housing perhaps two or three families, through the canal. Then a steamboat took them through Lake Erie to the mouth of one of the Ohio canals or to Detroit or some point on Lake Huron, where they landed and set out overland for their new home. Other pioneers going west by the Pennsylvania Canal built or purchased boats at Pittsburgh—several families often combining in one boat—and floated thence down the Ohio.

It was the boat of a westbound emigrant which was the first to be carried bodily on the Portage Railroad over the Allegheny crest. In the autumn of 1834, only a short time after the railroad was opened, a man living on the Lackawanna River started westward with his family and goods in a small keel boat. He floated down the Lackawanna and the Susquehanna, and entering the canal, was towed to Hollidaysburg. Here he expected to sell his boat; but a transportation manager named Dougherty, who had been anxious to try the experiment, suggested hauling the boat bodily over the mountain. The emigrant, highly pleased, gave his consent and waited a few days while Dougherty superintended the rebuilding of a car "calculated to bear the novel burden." Having been completed, the car was run into the water under the boat, and then drawn out with the boat atop.

"At 12 o'clock on the same day," said the Hollidays-

burg *Aurora*, "the delighted family began their progress over the rugged Allegheny. It was pleasing to see the comfort and convenience that the ingenuity of man had added to the journey of the emigrant. The whole family were comfortably located in the cabin of the boat, which appeared to glide up the heights of the Alleghenies, unconscious of its being a fish out of water, whilst some of the family were preparing the coming meal, others were lying on their downy pillow.

"And now you may see her safely resting on the summit of the Allegheny mountains—night has overtaken them, and there they await the coming morn. . . . On Tuesday our boat and crew left the sunny summit and smoothly glided down her iron way to Johnstown, astonishing the natives. She was safely deposited in her own element on the same evening amidst the plaudits of the congregated citizens"—and thence continued her unexpected journey "to the wild Mis-sou-ree."

THE DECLINE OF THE PENNSYLVANIA CANALS AND THE END OF THE CANAL-BUILDING ERA

THE main line of the Pennsylvania Canals had cost \$8,403,775, the Portage Railroad \$1,634,357, making the total cost of the line from Columbia to Pittsburgh \$10,038,133; but the early opinion of Pennsylvania was that the job was worth it. From all sections came reports of lowered costs, quick service and the rapid upbuilding of the territory. When the western division was first opened in 1829, a Pittsburgh newspaper remarked that the distance by wagon road from that city to Blairsville was 43 miles, and the freight rate had never been less than \$8.00 per ton; the distance by canal was considerably greater—73 miles; and yet freight was carried thereby for \$2.40 per ton. In short, the rate by land was 18¾ cents per ton per mile, by canal, 3⅓ cents per mile.

In 1833, when the Portage Railway was not yet ready for use, but when the canal was complete to the foot of the mountain on either side of it and goods were being transferred over the crest by wagons, Blairsville reported having received goods from New York by canal in eight days, whereas it had formerly required eighteen to twenty days by wagon or pack-horse.

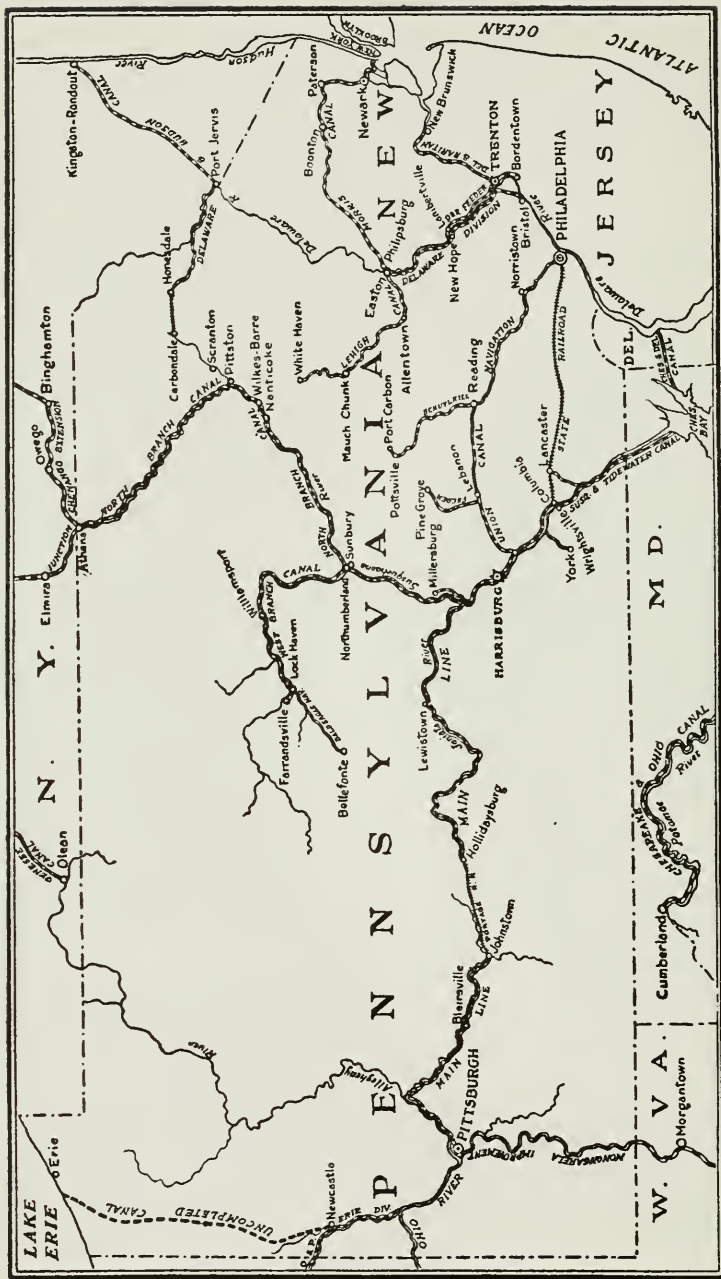
In order to compete with the Erie Canal, toll rates had been made very low, although the canal was more costly to operate than some others; and Pennsylvania was continually insisting that goods were being handled more cheaply over her canal than by the Erie. In 1834, when the main

line was just getting under way, *Moore's Philadelphia Price Current* said: "Only last year (1833) the papers of New York boasted in capital letters that goods had been transported to Cincinnati via Albany and the canal for the trifling sum of TWO DOLLARS AND FORTY CENTS per hundred pounds: we give it in capitals, for the whole benefit of the boast shall be prominently repeated. . . . Goods are now delivered from Philadelphia at Cincinnati for ONE DOLLAR AND THIRTY CENTS! Cotton has been brought from Alabama via the Pennsylvania Canal and delivered in Philadelphia at a less cost than it could be sent via New Orleans!"

This would seem to have been a sufficiently telling answer also to the widely heralded announcement of the merchant in Middleburg, Ohio, that he had received goods from New York via the Erie Canal, Lake Erie and the Ohio Canal for \$1.37½ per hundredweight.

The career of the Pennsylvania canals may be considered to have fairly begun in 1834, the year of the completion of the main line. During that year the West Branch Canal was completed to Williamsport, and the North Branch was pushing up the other fork of the Susquehanna in the neighborhood of Wilkes-Barre; the Delaware Division was opened in 1832, but its gravelly bed would not hold water, and it could not be used by large boats for several years. Josiah White, head of the Lehigh Coal and Navigation Company, who was expecting the Delaware Division to be a valuable extension of his own Lehigh Canal, became impatient and put the canal into condition himself.

Pennsylvania was cursed as was New York by insistent demands for canals coming from remote and rugged portions of the State, where waterways could be built only at great expense and with little hope of adequate returns; and the main line was not able to carry the expense of building these side canals as the Erie did its branches, because it did not and could not handle as much traffic as was carried on the Erie.



THE CANALS OF PENNSYLVANIA AND NEW JERSEY, SHOWING CONNECTIONS WITH ADJOINING STATES

These backwoods districts received a great stimulus when a canal was authorized through their territory. Prices of land began to rise long before work began. Then came the engineers and surveying gangs to increase the enthusiasm; and after them the contractors, sub-contractors, more engineers, foremen, gang bosses and armies of laborers, mostly Irish. Villages of shanties sprang up, blacksmiths' anvils began clinking, public houses and boarding houses were opened, the farmers not only had a good market at their doors for their food products, but they were asked to sell sand, clay, gravel and timber, and those who had good stone suddenly found valuable quarries opened on their farms. Everywhere there was life and bustle, money was plentiful, and it seemed as if permanent prosperity had struck the county at last. To few of those who were so elevated by this temporary affluence did it ever occur that the jovial turmoil was piling up on the back of the State a burden of debt and taxation about which they would grumble ferociously in the years to come; and forgetting the immediate benefits they had received, they would try to seek out the instigators of it and pelt them with hard words and adverse votes, if not, indeed, with criminal prosecution.

On the other hand, they often forgot also when they contemplated their tax bills that the outlet afforded by the canal had been the salvation of their neighborhood—which was true almost everywhere. The majority of the places touched by the old waterways received from them an impetus which was never thereafter entirely lost.

There were several districts which, despairing in their hopes to get canals from the State, finally proceeded to build their own. Lancaster, for example, improved the little Conestoga Creek by dams and short canals down to the Susquehanna, a distance of 18 miles, completing the job in 1828. York, on the other side of the Susquehanna, thereupon bestirred herself and constructed a similar improvement down to the river. Another such canal, the Beech Creek and

Bald Eagle Navigation, was built from Lock Haven to Bellefonte. The Monongahela River was also improved by locks and dams for a considerable distance and did a very large business for many decades.

During the first six years' operation of the State canals, the receipts averaged about \$1,125,000 yearly and the expenses of operation, maintenance, repair, etc., were about \$625,000, leaving a balance of \$500,000 profit which appeared very large to some citizens; but it was almost infinitesimal as compared with the yearly expenditures for the building of new canal mileage, and in fact, was not even sufficient to pay interest on the debt already existing. The North Branch Canal was being pushed up towards the New York State line and work was going forward on the division which was to connect Pittsburgh with Lake Erie. These ate up enormous quantities of money, and as years went by, more and more of the original works fell into disrepair and must be replaced.

Furthermore, the plain truth was that the Pennsylvania Grand Canal as a freight carrier to the West was not a great success, though it seemed very busy. There were several lines sharply competing for Western business over it. Peter Parley counted forty boats in the basin at Hollidaysburg at once in 1837; but that did not prove it as great a carrier as the Erie, and the very fact that they were halted there hinted at the principal, the irremediable flaw in Pennsylvania's great western canal. The prediction of the Erie, Pennsylvania, editor quoted in Chapter XI had been fulfilled to the letter. Because of its physical limitations, boats and freight could be handled neither as rapidly nor as cheaply by the Pennsylvania Canal as by the Erie.

To begin with, the eastern division alone from Columbia to Hollidaysburg had 108 locks in its 172 miles—25 more than the Erie had in its 364 miles; and adding the western division, there were all told 174 locks on the main line, or more than twice as many as on the Erie. The Port-

age Railroad was a veritable bottle neck, constantly clogged with freight, and expensive to operate, climbing and descending a total of 2,569 feet—nearly four times as much as the total lockage of the Erie. Much to their regret and greatly to the scandal of Pennsylvania politicians, the merchants and manufacturers of Philadelphia found it actually to their advantage to pay the freight on their westbound goods to New York and then ship over the Erie Canal.

There had been a great deal of carelessness and inefficiency in the construction of the canals (though the main line was on the whole a remarkably fine work) and costs had been much increased thereby. The costs of building the canals and railroads had, as in so many cases, been enormously greater than the advance estimates. The panics of 1837 and 1839 brought Pennsylvania into desperate straits, and the people became seriously alarmed. For two years the State had been paying the interest on its debt with paper money, which was already depreciating in value. A Philadelphia newspaper editorial of 1839 reflects the feeling that prevailed throughout a goodly portion of the population:

“Our State Debt has been built up through a system of fraud upon the people, and it is attempted to be increased through the same dishonorable means. When our system of internal improvements was commenced, the whole expense was estimated by the Engineer and Canal Commissioners at Five Millions. This was soon falsified by results. Yet estimates equally erroneous and equally deceptive have been made from year to year until now the actual debt of Pennsylvania, either incurred or authorized, amounts to Thirty-Two Million Dollars. And yet the system continues to be prosecuted as wildly as ever, and with as little hope of a speedy termination.”

It is difficult to say definitely just how much canal Pennsylvania owned at that time. A great deal of the mileage credited to her in 1840 was only partially completed or in

such condition that only small boats could traverse it. Possibly 606 miles could be listed, divided as follows:

	<i>Miles</i>		<i>Miles</i>
Main Line, Columbia-Hollidaysburg, Johnstown-Pittsburgh, . . .	276	West Branch Division, Northumberland to Farrandsville,	75
Susquehanna Division, Duncan's Island to Northumberland, . . .	40	Delaware Division, Bristol to Easton,	60
North Branch Division, Northumberland to Wyalsung,	124	Beaver Division, from Ohio River to New-castle and beyond, . .	31
		Total	606

On the West Branch Division excavation was proceeding to the mouth of Sinnemahoning Creek, 36 miles beyond Farrandsville. This work was never finished. In 1839 a committee from the Pennsylvania Senate visited Albany to inform the New York government that the North Branch Canal was soon to be completed to the State line and to urge that New York build a connection to it. In the western part of the State were scattered fragments of the division intended to connect Pittsburgh and the Main Line with Lake Erie. The Beaver Division was the only portion in working order; some work had been done between Conneaut Lake and Erie, and a costly feeder and branch aggregating 49 miles had been partially constructed. The State also owned 118 miles of railroad.

On February 1, 1840, for the first time in her history, Pennsylvania defaulted in the payment of interest on her debt; and it was the general opinion that the time had come to stop spending money. Construction work therefore ceased over the whole system, and in some districts it was never begun again.

Gradually the feeling grew that the public works were

either a great mistake or else the State could not manage them satisfactorily, and therefore they should be sold. Many legislators favored the idea, and there were investors who were willing to attack the problem from the other side. A group of them in 1844 organized the Pennsylvania Canal and Railroad Company and obtained a charter from the State. The act of incorporation provided for the sale of the railroad from Philadelphia to Columbia and the Main Line of the canal thence to Pittsburgh, including the Portage Railroad, all for the sum of \$20,000,000, which was to constitute the capital stock of the new company. The question of making the sale was submitted to the citizens at a special election and a considerable majority voted in favor of it. The difficulty that now arose was that the promoters of the company could not sell their stock; and so the Main Line remained in the hands of the State.

In 1845 the fragments of canal lying between Newcastle and Lake Erie were sold to a corporation which never succeeded in doing anything with them. Meanwhile, the country in general had swung back to such prosperity again that the Pennsylvania canals felt the effects thereof. There were several years of good traffic and revenue. In 1848 Governor Shunk, notwithstanding the fact that Pennsylvania by that time owed \$40,000,000 for canals, railroads and improvements on the Susquehanna and Delaware Rivers, notwithstanding the fact that the Pennsylvania Railroad had been chartered in 1846 to build a railroad from Philadelphia to Pittsburgh and had already begun work, declared that the State must never sell its public works. Succeeding Governors echoed this remark with more or less emphasis. The expense account for operation and repairs had mounted in 1847 to \$723,000 and in 1848 to \$1,008,429. The receipts in the latter year were \$1,500,555.

Not only did the new railroad select Philadelphia and Pittsburgh for its terminals, but it actually paralleled the main canal up the Juniata River and down the Conemaugh,

that being the only logical route for such a line. In 1849 the 60 miles between Harrisburg and Lewistown were opened, and in 1850 it had been pushed on from Lewistown to the foot of the mountain. The western division had been built with equal rapidity from Pittsburgh, and on December 10, 1852, communication was established between the two divisions, passengers and freight being transferred over the mountain by stage and wagon. And yet Governor Bigler still had sufficient faith in the canals to proclaim to the people that "The North Branch Canal must be finished, and the Allegheny Mountains must be passed without the use of inclined planes."

The work of altering the Portage Railroad was going on even while he spoke. The Legislature and Canal Commissioners were fighting hard to make the canal a success in spite of railroad rivalry. As early as 1836, when the railroad had been in use only two years, the Legislature had passed a resolution, ordering the Canal Commissioners to ascertain whether the planes could not be discarded. Nothing more was done within the next few years save to substitute locomotives for horses, but the idea of the planeless railway was gradually developed. Routes were surveyed, following in part the original line, though of course some long curves were necessary. Work began on the new line in 1850. The building was going on simultaneously with the building of the Pennsylvania Railroad track over the mountain a little to northward. In 1854 the latter was completed and began immediately to cut heavily into the canal's business.

The Governor was authorized that year to ask for sealed proposals for the purchase of the main canal. But alas! there was not one bid offered. The new Portage Railway was in operation on July 1, 1855, though not entirely completed. Again the Governor was directed to offer the Main Line at public sale. For several months there were no bidders. But in December that dreaded rival, the Pennsyl-



The railroad cut into the canal's business.

vania Railroad, offered \$7,500,000. If anything were needed to convince the Legislature of the futility of clinging to the system, it was the balance sheet of the following year, 1856, when the receipts from all the public works were \$2,006,000 and the expenditures \$1,943,900; leaving a margin of only \$62,100, which did not pay enough of the year's interest to be worth mentioning. The deal was accordingly consummated with the Pennsylvania Railroad in 1857.

In 1858 the Delaware Division, the Susquehanna Division and the North and West Branch Canals were sold to the newly organized Sunbury and Erie Railroad Company for \$3,500,000. Thus passed, in less than twenty-five years, a great transportation system which had once been Pennsylvania's pride and hope. Such pleasurable emotions as the State Government had ever been able to derive from it were mostly those of hope; for never from 1834, when the Main Line and the larger part of the laterals came into service, had its operations been satisfactory. Its principal merit was that of all the old canals—it had built up the interior of Pennsylvania and given its mineral and agricultural resources an outlet which not only enabled the citizens to pay the heavy taxes laid upon them by the system, but to prosper as well.

The decade between 1850 and 1860 saw the virtual end of the canal-building era in America. On the other hand, it was the greatest railroad-building period that the country had yet known. The two facts are supplementary, one to the other. The Chesapeake and Ohio Canal reached Cumberland in 1850, and never went farther. The James River and Kanawha stopped at Buchanan in 1851, and its subsequent excavations beyond that point were never completed. The Wabash and Erie blundered its way down to the Ohio River in 1855, but as the head advanced, the body was dying behind it. Most of the New England canals had already passed out, and others, such as the Ohio and Pennsylvania, began dropping off the map.

In that decade, also, were built many of the railroads

which still rank among the greatest in America. One has only to mention such roads as the Pennsylvania, a long western extension of the Baltimore and Ohio, the Erie, the Lehigh Valley, Philadelphia and Reading, Pittsburgh, Fort Wayne and Chicago, Wabash, Rock Island, Ohio and Mississippi, and Louisville and Nashville to indicate the importance of the era. Railroad influence was becoming powerful in legislative lobbies, and the canals could hope for no favors thereafter. Henceforth they were regarded as obsolete. The railroads were also becoming strong enough to wage traffic wars with the waterways. A report of a New York legislative committee in 1855 shows that the railroads entered into agreements with lake steamers, Hudson River and other boats wherever such arrangement was strategically sound, with intent to divert all possible freight from the canals to their roads.

The childish obsession speed!—speed!—more speed! had hastened the downfall of canals. The Congressional Committee on Roads and Canals put its finger upon the crux of the matter in 1834 when, in reporting upon the growth of railroad sentiment in Illinois as against the proposed canal, it said that the public imagination “was led captive by the flying motion of a railroad car, impelled by one of the most powerful agents hitherto discovered by the ingenuity and subject to the control of man.”

The latter history of the Pennsylvania Canals may as well be pursued to its sad conclusion. The Pennsylvania Railroad for a short time continued to operate the canal and the Portage Railroad—but kept a sharp eye on costs. In three months' time they discovered that the railroad had lost \$7,220. It was therefore closed in October, 1857, and its track torn up. Most of the rails were used on the Pittsburgh, Fort Wayne and Chicago Railroad's line across northern Indiana. Some of the stone sleepers upon which the rails had rested were taken to Altoona and used in building

the walls of the railway shops; and some may still be seen to-day, resting in their old places on the mountain slopes.

The east and west sections of the canal were operated in a desultory way for a few years by the railroad company. In 1863 about 30 miles of the western division, extending from Blairsville to Johnstown, was abandoned; and in the following year the remainder of that division was closed.

Meanwhile the Sunbury and Erie Railroad had rather promptly resold the North Branch Canal to the newly organized North Branch Canal Company for \$1,600,000; the Susquehanna Division and the West Branch to the West Branch and Susquehanna Canal Company for \$500,000; and the Delaware Division to the Delaware Division Company for \$1,775,000. The North Branch was extended to its destined terminus, Athens, where another privately owned waterway, the Junction Canal, connected it with New York's Chemung Canal. This line did a considerable business for several years. In 1863 the North Branch Canal Company sold that part of its line between Northumberland and Wilkes-Barre to the Wyoming Canal Company for \$1,010,000. In 1865 the portion between Wilkes-Barre and Athens was practically destroyed by a flood, and the half-hearted attempt to repair it was soon dropped. A railroad along its bank was opened in 1869.

In 1866 the Pennsylvania Railroad sold to the Pennsylvania Canal Company, a closely related corporation, that portion of the main line east of Hollidaysburg for a supposed consideration of \$2,750,000. The Pennsylvania Canal Company acquired a majority of the stock of the West Branch and Susquehanna Company in 1867 and operated these lines and the Juniata Division in the interest of the Pennsylvania Railroad, for which the branch canals proved rather valuable feeders during several years. In 1869 the Pennsylvania Canal Company absorbed the Wyoming Canal Company. It purchased the scattered fragments in north-

western Pennsylvania at a forced sale in 1870, but abandoned them in 1871.

In 1872 the Pennsylvania Canal Company was operating 358 miles of canal. This included the Main Line from Columbia to Williamsburg, near Hollidaysburg; the Susquehanna and North Branch Divisions from Duncan's Island to Wilkes-Barre; the West Branch from Northumberland to Farrandsville, and the little twelve-mile Wiconisco Canal. This system actually carried more than a million tons of freight in its peak year, 1871. The company then raised the tolls, and in 1874 reached its greatest net earnings, \$305,665. Thereafter the receipts slowly declined until in the latter 80's the balances began to be written now and then in red ink.

Meanwhile the mileage was also decreasing. In 1875, twenty miles had been eliminated; in 1885 only 324 miles were left; and in 1890 only 144 miles. This sudden drop was caused largely by the terrible rainfall over the Alleghenies in May, 1889, which sent the Juniata and other streams out of their banks and almost completely ruined the eastern division. That portion along the Juniata was partially repaired, but never put into full service again, and soon fell into disuse.

On the west slope of the Allegheny ridge, on the upper waters of the Conemaugh, was a reservoir which had been built sixty years before to impound water for the western division of the canal. After that division was abandoned, this lake had been embellished with a hotel and other attractions and maintained as a pleasure resort. It was the dam of that lake which broke on May 31, 1889, and overwhelmed Johnstown and neighboring villages with a flood which destroyed more than 3,000 lives.

In 1900 only about 100 miles of canal were left, and the net earnings were \$1,941. The portion along the main Susquehanna River was abandoned that year. In 1903 only 43 miles remained, and in 1904 the last mile was abandoned.

Only the Delaware Division was left. It had not passed into the hands of the Pennsylvania Canal Company, but was leased in 1866 by the Lehigh Coal and Navigation Company. As this book is being written, it is still in operation just as it was ninety years ago—the sole souvenir of Pennsylvania's once great system of canals.

THE INDIANA CANALS

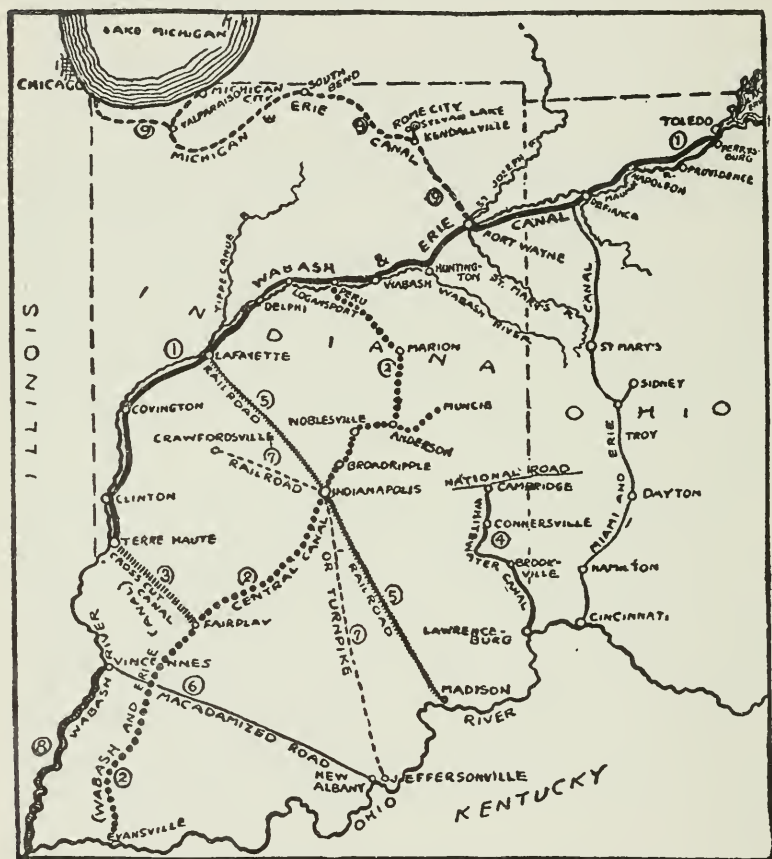
ONE of Washington's dreams was the connection of the Ohio River with the seaboard—on the one hand via the Potomac River, on the other hand via Lake Erie and the St. Lawrence. He made his usual investigation into the topography of the western country, and in a letter to Secretary of War Knox he mentions the very short portage between the upper waters of the Wabash and the Maumee near the site of Fort Wayne as the most feasible point for water communication between the Ohio and Lake Erie.

One Captain McAfee, who wrote a history of the War of 1812 in the West, spoke of the portage as being only seven or eight miles through a marshy tract whence water flowed towards both streams. "A canal will at some future day unite these rivers," said he. Captain James Riley, a Government engineer sent to survey lands around Fort Wayne in 1818, suggested the importance of a canal, which he thought need not be more than six miles long. He even made a rough survey of the route, but nothing more was done.

Governor Jennings of Indiana in his message of 1818 urged the Legislature to ponder upon a system of roads and canals to facilitate commerce and enhance land values in the State. But not until 1825, when Ohio broke ground for her two great canals, did Indiana begin to exhibit much interest. An Indiana delegate in Congress in 1826 asked for a land grant for internal improvements, but was un-

successful. An effort in the Indiana Legislature to procure an appropriation for a canal board and surveys also failed of action.

Meanwhile the White Water Valley in southeastern



From "History of Fort Wayne" by B. J. Griswold

INDIANA'S GREAT SCHEME OF INTERNAL IMPROVEMENTS

Indiana, the most thickly populated district in the State, was striving for better communication. In 1827 a corporation was chartered to build a canal along the White Water from the Ohio River to Fort Wayne, but accomplished nothing.

In the same year Congress granted to Indiana, to aid in connecting the navigable waters of the Maumee and the Wabash, a strip of land one-half of five sections wide on either side of the proposed canal. Spurred by the upper Wabash settlers, who were kept in poverty by their lack of transportation, the Legislature accepted the grant from the Government and agreed to build the canal. To reach the navigable waters of the two rivers, it must extend down to and past the rapids of the Maumee and down the Wabash at least as far as the mouth of the Tippecanoe.

A board of three canal commissioners was appointed and instructed to employ engineers, locate the canal, select land, lay off town sites and work out a system of financing the job. Indiana's unreadiness for such a project should have been painfully evident, for the State tax levy of the preceding year had brought in all told only \$33,000, which barely covered the expenses of Government. But the citizenry cared naught for that. Ohio, New York and everybody else were building successful canals; why should not they? Newspapers and magazines were full of articles about railroads and canals; and Indiana, although poor as poverty itself, was determined to see the job through.

But when the matter of locating the canal came to a focus, no little dissension and petty politics were developed. The southern half of the State could not see how it was going to derive any benefit from the improvement. The White Water country wanted a canal of its own, and threatened obstruction if it did not get one. Another group desired a canal between the Wabash and White River. Governor Ray and others favored railroads. Others called attention to the fact that Ohio was groaning loudly under a burden of taxation as a result of her internal improvement fad.

The upper Wabash citizens became uneasy lest the State forfeit the Government land grant by failure to build the canal within the required time. Indiana had now awakened

to the fact that to reach the navigable waters of the Maumee, a portion of the canal must necessarily lie in Ohio. A conference was held between representatives of the two States in Cincinnati in 1829 and an agreement was formulated to the effect that Ohio should build that portion of the canal within her boundary and reimburse herself with the canal lands lying contiguous thereto.

The Indiana Legislature wrestled with the question during 1829 and 1830. There was much sentiment in favor of railroads. But to this propaganda the canal people had a crushing retort; to build railroads would make necessary the buying of rails, locomotives and other material in the East, whereas canals would require only timber and stone, which could be had within the State, and thus their money would be kept at home. The argument was a powerful one, though for the moment it brought about only the ratification of the agreement with Ohio.

During the following winter, sales of canal lands were held at Logansport and Lafayette, but the results were disappointing. Forty-two thousand acres were sold and brought only \$75,000, an average of \$1.78 per acre, of which one-fourth was cash. Meanwhile Ohio, fearing that the Wabash and Erie would divert much traffic from her own Miami Canal and from Cincinnati, refused for several years to ratify the Cincinnati agreement. She did not finally approve it until 1836, and even then did not begin work. Notwithstanding this fact, a decided canal majority had developed in Indiana, and in 1832 the project was set in motion. An estimate had been prepared, setting the probable cost at \$1,081,970. More land was to be sold and the money realized was to be put into the hands of three fund commissioners, who were given power to act. A loan of \$200,000 was authorized.

In haste to set the work going, the Board met in Fort Wayne on Washington's Birthday, 1832, and broke ground for the canal amid great rejoicing. The engineering was

entrusted to Jesse L. Williams, who had learned his profession under an Erie engineer, and who had himself built portions of the Ohio canals. At the close of that year 19 miles were under construction, and the Board had \$104,673 on hand; but seldom does one find a record of a financial board so incompetent or which performed its functions in so haphazard a manner. Each member collected money and spent it according to his own ideas, often without consulting the others. But the people did not learn of this condition until years later.

Opposition to the canal was disappearing as astounding reports came from New York of the wonderful prosperity brought by the Erie, and in its stead were arising the same desires manifested in New York and Pennsylvania for canals in every unimportant neighborhood.

In 1834 a thousand men were working on the Wabash and Erie, mostly westward from Fort Wayne, Ohio having as yet taken no action towards building the eastern section. The laborers were as usual mostly Irish, divided in about the usual proportion of Corkonians and Ulstermen. A great battle was threatened between these factions at La Gro on one anniversary of the Battle of the Boyne, and the opposing armies were actually on the march when militia reached the scene and dispersed them.

In 1835 the commissioners decided that because of the importance of Lafayette as a steamboat port and commercial center, the canal must be pushed beyond the mouth of the Tippecanoe to that town. During that summer boats reached Huntington from Fort Wayne, but the tolls were still insufficient to pay repair bills, and wooden aqueducts built two or three years were already decaying. Seven hundred and twenty-nine thousand dollars had been spent in construction, and the extension to Lafayette would cost \$100,000 more. Had this canal been finished as planned and no other State works attempted, Indiana would have come through in comparative prosperity and happiness. But the

great halcyon period of 1835-36 was now upon the land; speculation and promotion were unbalancing the public mind; many sections were demanding improvements, and as sales of public lands were increasing tremendously, there seemed no reason why everybody should not have everything he desired.

Accordingly the Mammoth Internal Improvement Bill was drawn up, with a plum in it for every Jack Horner in the State, and Governor Noble signed it on January 27, 1836. By that mad act Indiana placed her neck in a yoke of debt which was destined to gall her for half a century and to humiliate her in the eyes of the world.

The bill carried appropriations aggregating \$13,000,000—one-sixth of the State's wealth at that time. The Fund Commissioners were instructed to borrow \$10,000,000 on twenty-five years' time at 6 per cent—a debt of \$20 for every man, woman and child in the State. The following works were authorized:

The White Water Canal; also a canal to connect the White Water with the Central Canal, if practicable; if not, a connecting railroad was to be substituted. For this work \$1,400,000 was set aside.

The Central Canal, leaving the Wabash and Erie somewhere between Fort Wayne and Logansport, running via Indianapolis and the forks of White River to Evansville. For this, \$3,500,000.

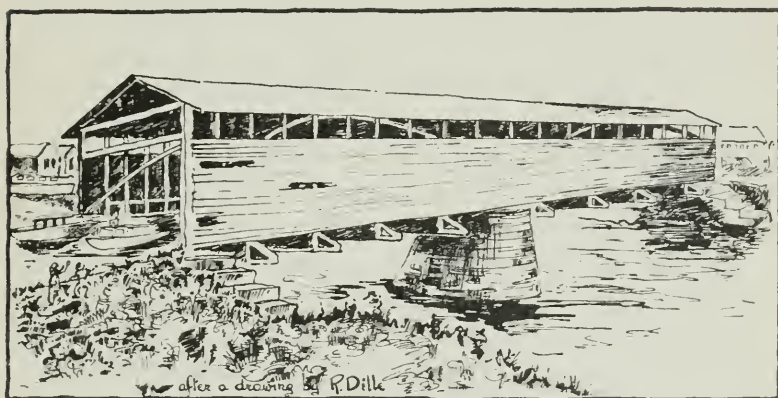
The Wabash and Erie was to be extended from the mouth of Tippecanoe down to Terre Haute and thence via Eel River to the Central Canal. \$1,300,000.

A railroad from Madison to Lafayette; a turnpike from New Albany to Vincennes, and a railroad or turnpike from Jeffersonville to Crawfordsville; each to cost \$1,300,000. \$50,000 was to be spent in improving the Wabash River from its mouth to Vincennes; and finally, a survey was to be made for a canal (if practicable; if not, for a railroad) from the Wabash and Erie near Fort Wayne to Lake

Michigan at Michigan City; this canal to be begun within ten years.

It was freely predicted by Legislators and other orators that within a few years the system would not only pay for itself but that its revenue would take care of all the costs of government and render taxation unnecessary.

The passage of the act was looked upon as virtually bringing on a millennium. In every town which expected any benefit from the improvements, bonfires were built on every street corner and illuminations, bell-ringing, parades,



Wabash and Erie Canal aqueduct across St. Mary's River at Fort Wayne

banquets and spread-eagle orations went on for days and even weeks. The whole land rang with praise of the young frontier State. Eastern newspapers made scornful comparisons between her magnificent spirit of enterprise and the somnolence of Massachusetts.

Towns along the canal and railroad routes now joined in the great land speculation mania already prevalent in other parts of the country. Fortunes were made in Evansville and other towns by the shrewd or the lucky gamblers.

The commissioners had been chosen each from a different section of the State, with an eye to securing justice

for all; the result now was a scuffle to see who could secure the most and the largest plums for his own district. An engineer-in-chief for the canals and one for the railroads was appointed, and a large corps of minor engineers and surveyors, numbering from seventy-five to a hundred, whose combined salaries ranged from \$55,000 to \$60,000 yearly. This force later came to be known with bitter humor as "the Eating Brigade."

One of the earliest things done was to send a large surveying party into northern Indiana to settle the question whether a canal or a railroad should be built from Fort Wayne to Lake Michigan. There the party spent months on labor which was perfectly useless to the State. By a general log-rolling agreement among the commissioners, work was begun on small sections of each improvement. No man wanted the other fellow's job any farther advanced than his own. A slight concession was made in favor of the influential White Water Valley. Work was begun on its canal in September, 1836, and in the spring of 1839 a few boats were running as far as Brookville.

With so much jealousy, incompetence and bargaining taking place in the State's business, it is not to be wondered at that discontent and sharp criticism were presently rife among both people and Legislators. There were loud demands that some one line be selected and completed first; but of course it was impossible to agree on which line that should be. Labor was scarce, other States engaged in similar work drawing heavily from the visible supply, and the contractors were keeping conditions unsettled by luring the best hands away from each other. Rumors of enormous expenditures began to reach the people. The report came forth showing that during the first year of the big project \$3,827,000 had been spent—and there seemed little to show for it. In 1837 the financial situation grew shaky. Banks were failing in the East, land sales slowed up, money grew scarce. Williams's report in December showed that more

than \$1,600,000 had been spent that year. Boats were running on the Wabash and Erie to Peru. Williams now estimated that it would cost \$23,000,000 to complete the improvements. The interest on this amount at 5 per cent would be \$1,150,000 annually, of which he believed the tolls would supply \$475,000; for the rest he suggested a special tax—unpleasant words for the ears of people who had been told only two years ago that the system would pay for itself and even eliminate taxation.

During 1838, \$1,693,000 was spent, and in his message to the Legislature in December of that year Governor Wallace, who had been overflowing with optimism a year ago, now grew doleful as he contemplated the State balance sheet. The interest then due was \$193,350; the revenue from taxation only \$45,000. "If this consideration does not startle us," said he, "it should at least awaken us." The Legislature now contemplated reorganizing the Board and ordering only one line built at a time, but matters had gone so far that even this was futile. Moreover, the panic of 1839 was now upon them. The Fund Commission could not pay their bills, and in August all work was suspended. The facts which the State then had to face were the ugliest in all its history.

"The policy of constructing the work and parts of works simultaneously was so well pursued that no considerable part of any work was completed or fit for use," said the *Tippecanoe Journal* of Lafayette in 1841. "There lies the system still, its unfinished excavations, embankments, locks, culverts, aqueducts and bridges hastening to ruin."

The situation was indeed disheartening. The Wabash and Erie had crept on to and beyond Logansport, but Ohio had not yet built the eastern extension, and without terminals the canal could not pay revenue. The White Water Canal had built the most mileage, but was still incomplete. On the Central Canal 750 men were working when the stop order came. Eight miles of the section from Indianapolis north had been completed, sixteen just south of Indianapolis and

nineteen on Pigeon Creek. These, together with the cross cut from Terre Haute to Eel River had cost \$1,820,026.



...a flood and then an epidemic...

Two small pieces of railroad and a few miles of gravel road completed the collection of public works.

At first the people did not comprehend the extent of the

disaster. They had been so infatuated with the illusion of prosperity that they could not believe that the State was bankrupt. It now began to appear that from the very start of the work in 1832 there had been gross mismanagement in the financial department. The original Fund Commission had been irregular enough in its methods, but the reorganized Commission was far worse. No books had been kept by the Commission, and the State had paid no attention to its operations. Blocks of bonds had been signed and delivered to the several members of the Board, to be disposed of as they saw fit; but the great bulk of them had been handled by Milton Stapp, a Fund Commissioner, and Dr. O. Coe, Secretary of the Commission. These two consulted with and made reports to no one but each other. Coe had his office in New York in order that he might be in closer touch with brokers and men of finance; but he was also enabled thereby to hobnob with his shady pals, the Morris Canal and Banking Company, and to make trades with other crooked bankers which enriched him at the expense of the State of Indiana.

When it developed that Stapp and Coe had put no less than \$3,000,000 worth of the State's bonds out on credit, most of them to the Morris concern, which now became bankrupt, an investigation was demanded. A Legislature of very limited ability attempted to probe the tangled affair but could make neither head nor tail of it. Through a session of eighty-five days it wrangled and played at peanut politics, while the chicanery went merrily on. The people of the State lost patience. Cass County petitioned the Legislature to adjourn, charging that it had no capacity for anything other than spending money. The session ended with nothing done.

The record of Coe's knavery is too lengthy to recite here. He was a stockholder in the Morris Canal and Banking Company, and split his illegal gains on State bonds with the company's officials. His method was to make theoretical sales of the bonds to the Morris Company at 88, but in

reality to sell them (as if for the Morris) to wildcat banking concerns at 96, being careful to collect sufficient cash to cover the \$8.00 per share profit, which he would then divide with the Morris directors. Several of the wildcat bankers failed or absconded without paying the balance due on the bonds. The Morris, when it failed, owed the State of Indiana \$2,536,611, to say nothing of having shared in the stealage described. It was totally insolvent. An audit, completed in 1842, showed that \$15,000,000 in bonds had been issued, for which the State had received only \$8,593,000 in cash and \$4,000,000 in worthless securities. More than \$2,000,000 had been embezzled by various State officials and agents.

Four or five things were clear; the State owed \$13,000,000; the yearly tolls from the canals then in operation were only \$5,000 and receipts from the railroads \$26,500; the Rothschilds, who had bought some of the State's bonds, were becoming very insistent in their demands for interest; so were the contractors to whom the State owed \$1,000,000. Many wild ideas were proposed. Congress was petitioned for aid, but gave none. Some recommended completing the improvements with scrip or paper money. The Legislature favored this idea to such an extent that it passed an act in January, 1840, authorizing the issue of \$1,200,000 in treasury notes. The completion of one line at a time was also urged; but the soundest advice seemed to be that the State ought to get rid of most of the works altogether.

A corporation took over the White Water Canal and completed it in 1846. This canal was 76 miles long and was connected with Cincinnati by another waterway. But its valley was too steep and narrow to be safe for it. A freshet in 1847 did \$100,000 worth of damage and another the following year \$80,000. A railroad paralleled the canal in 1865 and quickly killed its business. The Central Canal fragments were sold to private investors for \$2,425. Other unfinished links in the system were either sold or abandoned.

Many felt that work on the Wabash and Erie must go on. The State had accepted Government land on a promise to build it, and upon Indiana's insistence, Ohio was now finishing the eastern link with Lake Erie. Work proceeded in a desultory way on its Indiana end until the Tippecanoe River was reached in 1841; and in 1842 the Legislature authorized its extension to Terre Haute.

The work was now being carried on largely through the use of scrip, which became humorously famous throughout the West through its nicknames. Various issues of it were printed on red, white or blue paper and were called Red Dog, White Dog and Blue Dog. These various scrips were for some time the only circulating medium along the canal. In some towns not yet reached by the canal the merchants agreed to accept the scrip at par in payment for goods until the canal should reach their town. Then the scrip depreciated to forty cents on the dollar, and many merchants were ruined.

In 1843 Ohio completed the eastern end of the canal, and the first boats came through from Lake Erie amid great rejoicing, for now at last there seemed some hope that the enterprise might be made profitable. As construction progressed, more Government land was made available for sale. The country was growing more prosperous, and hopes were high that the work would yet be a success. Since the completion through to Toledo, the line boats were bringing in thousands of new settlers—and there was still plenty of room for them, for one reads of bears being hunted in the vicinity of Knightstown.

But the canal had defects and limitations which augured ill for its future. Sometimes it had too much water, sometimes not enough. The effect of a drought may be seen in an editorial apology in the *Fort Wayne Times* and *People's Press* in August, 1845. "We regret to say exceedingly that it is very uncertain whether we shall be able to issue more than an extra next week. We have the promise

. . . of a supply of paper by the first boat; but that boat is not yet arrived, and when it will, we know not. We learn that the canal between Huntington and La Gro is destitute of water, and that there is not enough in the Wabash to fill it." Neither were the tolls and land sales yet sufficient to pay more than a small portion of the interest due on the State's outstanding bonds. As to retiring the bonds themselves, that seemed almost impossibly remote. For two years the bondholders pressed for some sort of settlement, and finally in 1847 the Legislature simply deeded the canal to them and told them in effect to get what they could out of it. The bondholders, some of whom were poor and had their all invested, made heated protests against this method of settlement, which meant a loss of half their investment, but in vain. To the bondholders, one of the most galling features of the settlement was the fact that they would be compelled to raise \$2,225,000 to complete the canal to the Ohio River. Meanwhile the State was left with a debt still of \$6,732,880, which would have to be paid slowly by taxation.

Business increased rapidly in the latter '40's. Docks, elevators, warehouses, hotels and mercantile establishments sprang up, and all the towns along the line prospered. Lafayette became such a busy port that the public square was choked with wagons and teams, which often camped there for two or three days while waiting for an opportunity to reach a boat. Packets had been running for several years, and by 1844 the fastest packet service in the country was in operation between Toledo, Fort Wayne and Lafayette. In 1849 the first boats reached Terre Haute. That was an unfortunate season, however. First there was a flood and then an epidemic of cholera which broke up construction gangs, nearly stopped the land sales and reduced the tolls to \$135,000—\$11,000 less than in the previous year. But 1850 was fairly prosperous. Boats reached Washington

that year, though another outbreak of cholera killed 150 laborers and demoralized the force for a time.

In June, 1852, boats reached Maysville, 392 miles from Toledo. Tolls were lowered 40 per cent that year, and the receipts rose to \$193,000—the high-water mark in the canal's history. But the shadows were already closing around it. All the older lock gates, bridges and wooden aqueducts were rotting and frequently breaking. Freshets broke the banks and washed earth and sand into the channel, so that boats were sometimes aground and stranded for weeks. Numerous lawsuits were pending. A flood in 1853 destroyed many aqueducts, and \$70,000 was spent on repairs. A railroad was under construction from Evansville to Terre Haute and another along the upper Wabash. The bondholders appealed to the Legislature in a final effort to save their investment, pleading that the State had not proven true to its agreement, but their argument fell upon deaf ears.

The great popular enthusiasm of a few years before for the canal had now changed to contempt with the coming of that new toy, the railroad. There had been numerous complaints that malaria was being caused by the canal supply reservoirs, especially the Birch Creek Reservoir; and the growing scorn for the old ditch, fostered by journalistic sneers, soon led to outrages. One of the aqueducts was fired by a mob in 1855, and men with blackened faces cut the Birch Creek dam, draining the reservoir and leaving a long section of channel dry. The dam was repaired, and was cut again the following year.

The southern end of the canal finally reached Evansville, 452 miles from Toledo, making it the longest canal in America; but at that very moment it was becoming evident that the end was near.

The tolls in 1857 were only \$60,000; \$40,000 was spent in repairs below Terre Haute alone. Floods broke the banks and destroyed aqueducts in several places. The trustees

ordered any portion of the canal not paying expenses to be closed; and all that portion below Terre Haute was closed immediately. The canal was offered on lease to any one who would keep it in repair for its use. Some half-hearted attempts were made to operate it below Terre Haute, but no repairs were made, and that portion closed forever in 1860. The upper half continued to operate fitfully for a few years, but the Wabash Railroad by cutting rates soon drove it out of existence. The last boat which ran through from Lodi, near Terre Haute, to Toledo, was the *Rockey Mountain*, which cleared October 26, 1872. The trustees formally surrendered their trust in 1874. That year the last boat on the canal east of Lafayette was crossing the Deer Creek aqueduct when the decrepit structure gave way, and the mules and negro driver were swept down by the roaring water into the creek below and drowned. As late as November, 1875, a boat managed to get through from Lodi to Lafayette, but by that time the greater part of the old waterway was naught but a muddy, noisome ditch.

The Wabash and Erie would appear to have been the most colossal, the most tragic failure in all canal history, but pitiable as it was, it played a tremendous part in the making of Indiana and the Middle West.

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